Cedar River Instream Flow Commission
Final Minutes

SPU Water Quality Lab

October 7, 2009

Organizations/Members Present:

- Seattle Public Utilities -- Tom Fox, Rand Little
- King County Dept. of Natural Resources and Parks -- Steve Hirschey
- Muckleshoot Tribe -- Holly Coccoli
- NOAA Fisheries -- Jim Muck
- Seattle City Light -- Liz Ablow
- U.S. Army Corps of Engineers -- Larry Schick, Lynne Melder (by phone)
- Washington Department of Ecology -- Jay Cook

USGS Guests:
Christiana Barnas, Andy Gendaszek, Chris Konrad, Chris Magirl

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I. **Call to Order:** Tom Fox called the meeting to order at 9:45 AM.

II. **Approval of Agenda:** Approved as presented.

III. **Approval of Draft Minutes:** August and September Draft Minutes approved with no further changes.

IV. **News and Notes:** Jay Cook reported that Jay Manning would be leaving his position as the Director of the Department of Ecology to become the Governor's Chief of Staff. Polly Zehm will be the Acting Director. Steve reported back to the group that LIDAR images of the Cedar River were developed at 6-foot contour intervals in 2001. The exact extent of coverage on the Cedar is a bit unclear. Holly and Steve provided a brief update on a Regional Water Supply Planning Workshop. Among other topics, four presentations were provided on base flow deficits in the region. Steve mentioned that the permit exempt well issue continues to percolate statewide. A recent publication from the State Attorney General's office appears to set the stage for possible legislative action on the topic.

V. Real Time Water Management:

Hydrologic Conditions for Tolt and Cedar: Tom reported that conditions are quite dry. "Pool split" was initiated as soon as the reservoir reached an elevation of approximately 1550 feet in late August to reduce reservoir seepage losses. The 8-week moving average flow for USGS gage 12115000 (Cedar River above the reservoir) is below the alert phase and close to 1987 levels.

Although the reservoir elevation is above the level for switching up to High Normal flows on October 8, both inflow criteria remain well below the level required to trigger high normal flows. Holly asked if there is any decision making flexibility to consider the fact that the reservoir elevation was about 7 feet above the switching level. Tom responded that flexibility was limited due to the lake outlet elevation issue, the condition of the temporary floating pump plant and the long lead-time required to mobilize the plant.

SPU has already begun spending money to secure generators and repair the floating pump plant. The reservoir is expected to continue to drop at a rate of 1 to 2 feet per week until the watershed receives substantial rainfall. The reservoir is currently at elevation 1548.9 feet. Full mobilization of the temporary floating pump plants would need to occur prior to reaching elevation 1541.5 feet. In the new altered condition, gravity flow out of Chester Morse Lake into Masonry Pool ceases at approximately elevation 1538 feet.

Jim asked if the fall high/low normal switching criteria might be revised with the completion of the proposed Chester Morse Lake Pumping Plant. Tom indicated that revision could be an option, but revisions would also need to consider potential impacts on bull trout in the reservoir.

Municipal water demand has been relatively low recently, near winter base flow levels. Recent low demands may be due in part to weather, current economic conditions and continued conservation efforts. Instream flows have remained above guaranteed levels with voluntary supplements during August and the first half of September followed by scheduled stepped increases during the last half of September. Recent actual flows have been greater than estimated unregulated flows. There were no downramping exceedences during the last month. The Cedar Falls Hydropower Facility did experience a load rejection, but the emergency bypass system worked correctly to prevent a loss in flow to the river.

Lake Washington: Lynne reported that the current lake elevation was 20.4 feet and expected to gradually drop to slightly above 20.0 feet by the end of the month. During the past month, an ROV was used to inspect the new saltwater drain screen system. Fouling has resulted in some damage of the screen system. Chuck Ebel has been monitoring the diffuser well. Although he has observed a few fish, numbers are low and he does not believe any Chinook or steelhead are trapped in the area. The Corps has been avoiding use of the saltwater drain and had to open spillway gate #5 to help draft the lake and alleviate saltwater build-up.

Jay asked what was fouling the saltwater drain screen system. Lynne reported that it was algal growth on the net mesh and kelp inadvertently carried into and above the locks by traveling boats. Lynne reminded the group that the screens are a temporary solution to the saltwater drain impingement issue. The Corps is launching a planning initiative to address this and other issues including major facility rehabilitation.

***Fish Update*:** Holly reported final adult Chinook and sockeye estimates from the Locks. This year, an estimated 5,075 Chinook and 22,159 sockeye passed upstream through the locks. This is the lowest recorded annual count of sockeye and is less than half the 12-year average annual count of Chinook. An estimated total of 14,039 adult coho passed through locks facilities as of September 20.

The new broodstock collection facility in Renton seems to be working quite well this year. The number of sockeye collected so far is significantly above last year's collection and Chinook appear to be moving quickly upstream past the facility. The spawning survey crews report a total of 135 Chinook redds in the mainstem Cedar as of October 5. As of October 4, 99 Chinook had passed upstream through the Landsburg fish passage facility.

Forecasts and Water Supply Outlook: Larry provided a weather forecast update indicating dry weather through the later part of the weekend, then some rain possibly Monday through Wednesday. Currently it does not look like there will be a lot of rain with this first event, but the models are suggesting a shift into more normal fall patterns. Larry indicated that this pattern shift often occurs around October 20, plus or minus five days. Larry expects a minor increase in stream flows with forecasted weather for early next week. Hopefully, this will signal the return of the fall rains. However, the forecast is a bit far in the future to have high confidence. We'll know more next week.

Larry went on to report that ENSO parameters in the Pacific are currently indicating an El Nino condition with a weak to moderate El Nino forecasted to persist through the winter. The effects of El Nino in our area are variable, but low elevation basins such as the Cedar and Green might expect a somewhat higher likelihood of lower than normal snowfall.

Tom reported that, with switching criteria indicating low normal fall flows, the current dry conditions and near-term forecast for continued dry, SPU is planning to initially provide low normal fall flows. The increase to low normal flows will be started today to ensure compliance prior to midnight tonight. Conditions and criteria will be monitored closely and will hopefully improve in the near future to allow a switch up to high normal. Holly indicated that a switch up to high normal as soon as possible would be beneficial; perhaps even before inflow criteria are fully met.

VI. Supplemental Studies

Peak Flow AMP: Project Leader Chris Magirl and his staff were joined by Chris Konrad to provide the IFC with a Powerpoint presentation on the selection of stream reaches for the detailed analysis and modeling tasks associated with objectives 3 and 4 of the Peak Flow Adaptive Management Project. Although the project will consider the entire lower mainstem river from Cedar Falls to Lake Washington, the stream reaches for this particular aspect will be selected from the river below Landsburg.

In a previous meeting with an IFC subgroup, 10 candidate reaches were selected from the lower river. Since the meeting, USGS staff have analyzed characteristics of the reaches and today provided information to help the IFC priority rank the reaches. Aerial photographs of all reaches were provided from maps.live.com. The goal today is to select two relatively unconfined reaches and two confined reaches. Then, USGS staff will conduct site visits and propose a final unconfined and confined reach for the analysis. The group selected the Slide Reach and the Belmondo reach as the top two unconfined candidates and Confined Reach #2 and the Horse Farm Reach as the top two confined reach candidates.

Chris, Andy and Christina are planning to float the river with Karl and Rand to collect data for the project. During their first float, they will assess the four top candidate reaches and get back to the IFC with a recommendation. Chris will forward an electronic version of today's PowerPoint to the group.

IHA Analysis: The primary task for today was to make an initial attempt to identify which of the original 33 IHA parameters are of highest interest on the Cedar River. Rand distributed a summary table of the IHA parameters organized into five categories. A PowerPoint presentation of the results of the first Cedar IHA analysis was provided to help support the discussion. The group concurred that all Category 1 parameters, *"Magnitude of monthly water conditions"*, were of interest. For Category 2 parameters, *"Magnitude and duration of annual extreme water conditions"*, the 1-day maximum, 30-day maximum (perhaps adjusted for season),

and 7-day minimum appear to be of greatest interest. From Category 3, *"Timing of annual extreme water conditions"*, the group selected the 1-day minimum parameter. For Category 4 parameters, *"Frequency and duration of high and low pulses"*, the group needs a better understanding of actual high and low threshold values used in the model run and the sensitivity of output to different threshold values. Rand agreed to try to test some alternative threshold values. The group agreed that Category 5 parameters, *"Rates and frequency of water condition changes"*, could be of use in the Peak Flow AMP project. However, to be useful we'll need a better understanding of the exact flow thresholds used in defining flow rises, falls and reversals. Rand will explore the thresholds and report back.

Chris Konrad mentioned that he had developed a spreadsheet model for calculating some alternative hydrologic metrics that may be of use to the group. He offered to input the Cedar simulated pre- and post-development flow data sets into the model. Rand will forward the data to Chris and they will discuss the output and its potential use.

VII. Agenda Items for Next Meeting:

1) IHA parameters
2) Fall supplemental flows
3) Update from Roger Peters

VIII. Meeting adjourned at 12:35 PM